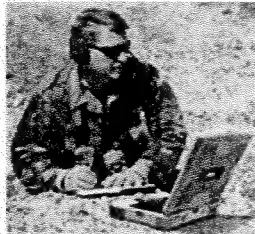


AGNITIO

Your Voice Biometrics Partner
for Homeland Security



SIFT

SPEAKER IDENTIFICATION FIELD TOOLKIT

SIFT

- a BS³ Family member -
for Military and Intelligence organizations

Speaker Identification Field Toolkit (SIFT)

a **stand-alone system** designed for **field personnel**

to **capture live voices** and **compare** them

against voices' internal database

- typically field forces, border control and military personnel -

SIFT

SIFT, based on the precise and ultra-fast BS³ core engine, is a **stand-alone 1:M identification system** ready to be installed in a portable device, designed to **record voices** of suspects in the field and do **quick searches** within a pre-loaded database of targets of interest (**up to 1000 speakers**).

Features:

- **Voice Recording (or loading):** SIFT allows users to record the voice of suspects in the field (only 7s of net speech are necessary), automatically converting them to the optimal system settings;
- **Fast search:** SIFT allows users to execute fast searches into the pre-loaded database (1:M identification) in a few seconds. The identification results consist of a **short list of possible candidates** with matching scores ranked from highest to lowest probability.
- **Friendly User interface:** Easy to use user interface providing together with the match a complete profile of the suspect, including biographical info and picture allowing thus a second visual authentication process;
- **Strong front-end capabilities:** SIFT has strong front-end capabilities (audio validation, Automatic Voice Activity Detector (AVAD)) to remove artifacts, noises and non-voice events;
- **Interoperability:** SIFT maintains a full **connectivity** and interoperability with the Master Repository BS³ system where all voice models are stored and managed;
- **Database management:** SIFT allows users to introduce biographical details and pictures for easy identification of potential candidate suspects. SIFT has been designed to store up to 1,000 speakers.

Capabilities:

- Speaker Management
- Voice recording on the field
- Speaker Identification (SID)

Use Cases:

- Quick identification in the field:
Checking speaker identity (boarder access control, check points)
- Quick identification during an outgoing investigation

Benefits:

- Live identification (speed up identification of individuals)
- Red light / green light scenario: Green, you go through the control; Red, you do not pass

Packaging:

- SIFT is delivered as a stand-alone solution ready to be installed in a portable device



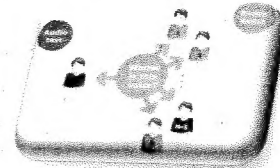
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ASIS

AUTOMATIC SPEAKER IDENTIFICATION SYSTEM



Automatic Speaker Identification System (ASIS)

deployed for building

centralized voice biometrics databases

- dedicated to law enforcement organizations -

providing police forces with a **new tool** for **identification**

of suspects and criminals **during investigations**

ASIS - Feature rich capabilities:

ASIS provides services comparable to existing Automatic Fingerprint Identification System (AFIS):

- Collecting voice biometrics information of known or unknown suspects and related details (e.g. name/group) on a central database;
- Comparing 'field' samples (e.g. intercepted calls) of an unknown individual against voice biometric models stored in the central database (or a sub-unit of it by applying criteria such as Gender or Language): **1 to M identification**.

The identification results consist of a list of possible candidates with matching scores (ranked from highest to lowest probability to show that the audio test belongs to the suspect), thus providing support for further investigations.

ASIS has been designed to cater for different customers' **requirements** (small to large deployments). ASIS takes advantages of **client-server architecture**: deployment cost reduced, no disk space needed on the client's PC, data stored on the server with far greater security controls, control access and resources guaranteed, etc.

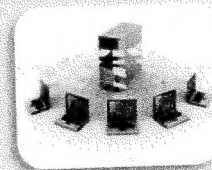
ASIS uses AGNITIO's proprietary and pioneering voice biometrics technology (**text independent, channel independent and language independent**) based on unique information extracted from an individual's vocal tract, thus obtaining a high level of accuracy and reliability.

ASIS Functions:

- Centralized Voice Biometrics Database
- Speaker Identification (SID)

ASIS Use cases:

- **Storage of voice samples** for further intelligence required in a speaker query



- **Subsequent identification** of speaker/s involved in a case during a Police or Security forces Investigation



ASIS's web-based interface is intuitive, scalable and can be integrated into a multi-modal platform including complementary biometrics to increase identification accuracy

ASIS - Key competitive advantages:

→ Architecture

ASIS is a distributed system **client-server** whereby the application server responds to requests coming from all Web clients: ASIS provides identification capabilities for multiple operators with multiple simultaneous requests

ASIS is:

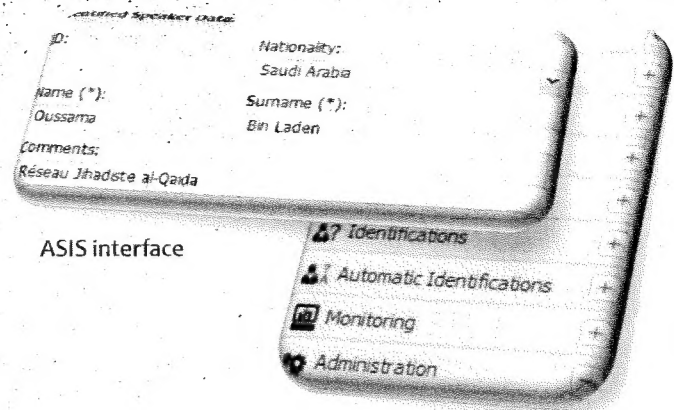
- **Intuitive:** does not require any expertise
- **Scalable:** from a single server to multiple server system
- **Modular:** from 5,000 to 1 million voices stored and from 5 to up 1,000 simultaneous connections

→ Main functionalities

- Database management: registration, modification, deletion, search
- Training (voice model) and launching identification (immediately or delayed)
- Process monitoring and administration
- Database access control (different profiles)

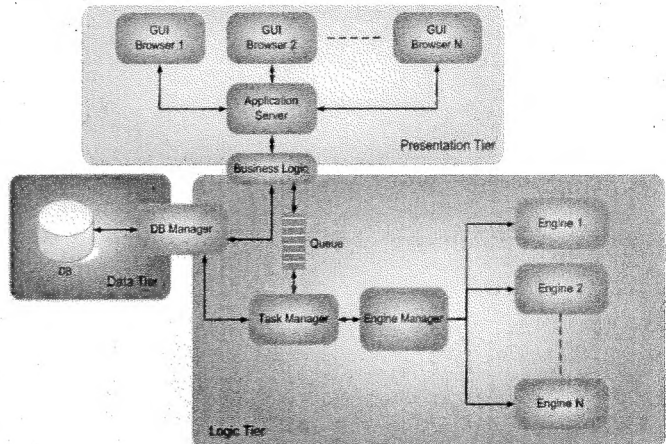
→ Performance

ASIS's multi-engine architecture enables speaker identification among more than 100,000 voice models in 1 minute, on recommended hardware platforms



ASIS interface

ASIS Architecture



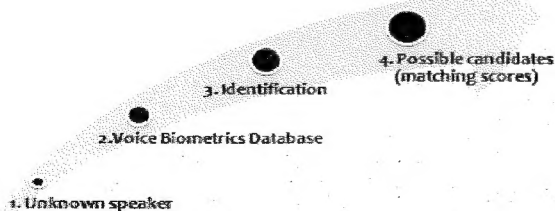
AGNITIO - Leading Voice Biometric Technology for Homeland Security:

Recent independent tests conducted by International Biometric Group (IBG) demonstrated **AGNITIO's superior voice biometric technology capabilities.**

'Agnitio identified the correct voice within the top 2 results 99.02% of the time using 60 seconds of audio in a cross channel environment.'

International Biometric Group
Research Consulting Integration

AGNITIO's voice biometric consultants are available to provide all the necessary expertise and support to our clients worldwide in order to ensure the best results. Consulting services include voice database creation, basic and advanced training for users and system administrators.



ASIS in Keywords:

'A pioneering Voice Biometrics Database'

Voice Database Management,
SID

High Accuracy

Rapid and Efficient

Intuitive and User-friendly

Scalable

Modular

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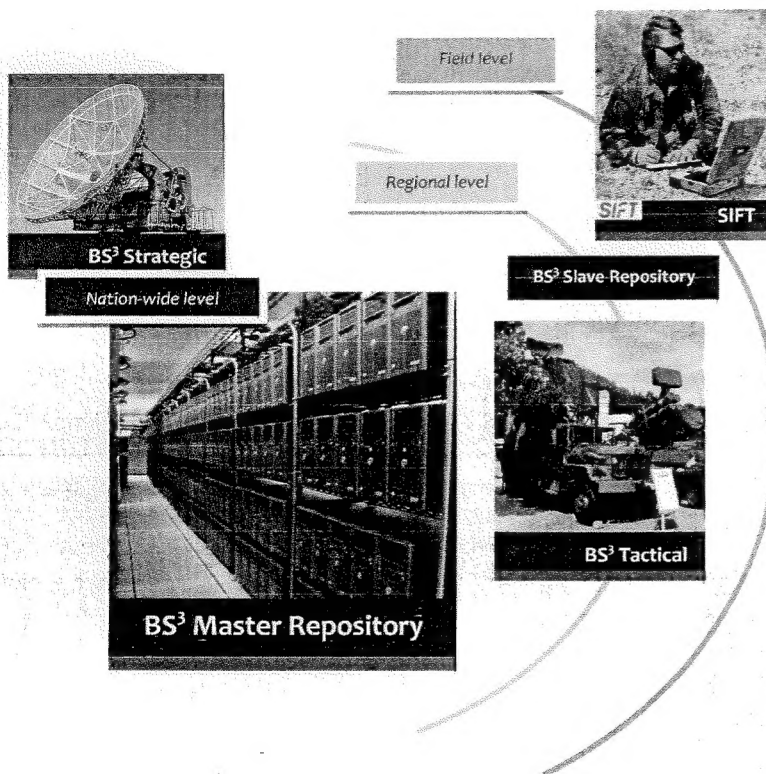
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Key competitive advantages:

Based on the market leading **BS³ Engine** – Text, channel and language independence

- **High speed performance:** 1:1,000 identification processed within **19 seconds** (fastest scoring time available);
- **Small features and model sizes:** respectively 7kB and 1.8kB (smallest ever used in the marketplace) – allowing up to 1000 times reduction in memory needed;
- **High accuracy:** based on the state-of-the-art GMM/JFA voice biometric technology;
- **Multi-speaker detection:** up to 2-speakers in the same recording with the fastest and most efficient solution available in the marketplace.

(Learn more in BS³ Engine brochure)



BS³ Family

The BS³ Family of products for speaker surveillance and management for Military and Intelligence organizations consists of:

- **BS³ Master Repository**, designed to store and search over a large number of Voice Targets;
- **BS³ Strategic**, designed for mass voice interception and voice mining;
- **BS³ Tactical**, designed for tactical voice surveillance;
- **SIFT** (Speaker ID Field Toolkit), designed for agents in the field.

BS³ Family products are **easy to integrate** in all current platforms both in the command and control center and in the field.

BS³ Family allows an **incremental deployment** of all voice surveillance tasks, from tactical to strategic applications, from human voice gathering to electronic sensors, guaranteeing easy information transfer (communication and data exchange), compatibility and scalability.

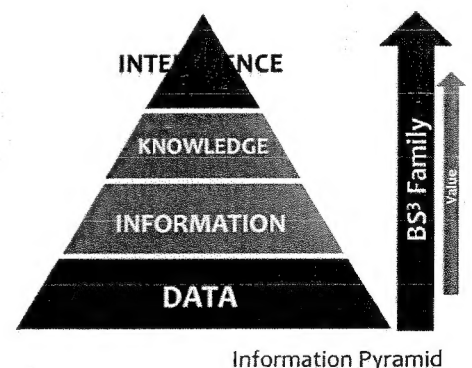
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